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ABSTRACT

A study examined factors related to the high failure rate of architectural students at the University of Wisconsin-Milwaukee on an essay writing task designed to show proficiency in writing before gaining junior standing. Students become eligible to write the essay by getting a score of 65 or better on the Wisconsin English Placement Test (WEPT) or a B minus or better in a composition course. The essays by the architectural students were reread, using Diederich's analytic scale, which is based on the following criteria: idea and organization, flavor, usage, punctuation, and handwriting. Results showed that some of the students could not organize their thoughts well, but that more of them tried to express their ideas without adequate support or coherence or just didn't know what to say, while the largest number of students lacked control of the language. Failure rate was also attributed to (1) ineligibility (based on the WEPT scores), (2) failure in or lack of writing courses, (3) a nonnative language background, (4) sex, and (5) cognitive style. (HOD)

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WHAT'S WRONG WITH ARCHITECTURE?

Donna Gorrell

At the University of Wisconsin-Milwaukee, four colleges and a program require that students pass an essay showing proficiency in writing before gaining junior standing. Students become eligible to write the essay by getting a score of 65 or better on the Wisconsin English Placement Test (WEPT--an objective test) or a B- or better in a composition course. The college of Letters and Science administers this essay five times a year, with about 600 students participating each time. As Coordinator for Proficiency Testing in the English Department, it is my job to write and test the questions, select model essays, train the readers, supervise the reading, and counsel students who fail. Each essay is read holistically by three trained readers who know nothing about the student or the scores of previous readers. We use model essays and graded criteria on a rating scale of 1 to 4, one being failing and two and above passing. A two roughly corresponds to a grade of C. After the essays have been read, I send the scores to the Letters and Science office, which notifies the students of whether or not they passed.

I get a computer printout describing overall performance for each administration of the essay. These statistics give me figures for all the students and a breakdown by colleges. For each category I receive total passes and fails, a breakdown by eligible and ineligible students, number of students who

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have taken composition courses and their grades, ACT scores related to success on the essay, and other related information.

The overall rate of failure ranges from 30 to 40 percent, and various factors influence this rate: the topic and the time of the year are probably the most significant. Usually we have a few students writing the essay who are ineligible but are allowed to write anyway for some reason, some colleges being more lenient on this matter. But the success rate of ineligible students is low, only 30 percent--that's 61 percent failing. We find a high correspondence between success in writing the essay and success both on the WEPT and in writing courses. The 1980-81 summary shows a 39 percent fail rate for all students and a 35 percent fail rate for students scoring 65 or better on the WEPT.

On every printout, one statistic stands out consistently in the breakdown by colleges. One school, the College of Arthitecture and Urban Planning, regularly has a failure rate much higher than that of any other school. In the 1980-81 summary, the rate of failure was 56 percent. In other words, only 44 percent of the Architecture majors writing the proficiency essay last year passed it. Why? Several reasons have been suggested: the students don't take composition courses, they have a high percentage of ineligibility, more of them are foreign, more of them are males thus less adept verbally, and, finally, being artistically oriented, they may have thinking patterns that are right-hemisphere dominant. I've considered all of these factors and in this paper am reporting the results of my investigation. Any findings are inconclusive and only preliminary to further study.

I began my search by isolating the September 1981 essays written by Architecture students. I reread 65 essays, using Diederich's analytic scale based on seven criteria: idea and organization, each of which had a possible

high of ten and a low of two; and five other factors--flavor, usage, punctuation, and handwriting--each of which had a high of five and a low of one. A middle score would total 30, the highest being 50 and the lowest ten. My analytic scores on these 65 essays corresponded closely with the holistic scores given by the readers, thus backing up the validity and reliability of both readings. The 36 essays that had been failed by the general impression readers scored below 30 in my analysis, and the passing ones scores above 30. Taking a closer look at the results of my analysis in order to determine the reasons for failure, I searched for evidence of three factors: weakness in organization, weakness of idea development, and weakness in usage and mechanics. Some students failed on all three factors, some on two, and some on one. Some essays were indeterminate--a general across-the-board mediocrity. Tallying the occurrences of the three factors that were prominent enough to be determined, I found 11 very low scores on organization, 17 on idea, and 23 on errors. It's difficult to draw any inferences from these data beyond supporting what we already know about the nature of unskilled writing. Some of the students cannot organize their thoughts well, but more of them try to express their ideas without adequate support or coherence or just don't know what to say, while the largest number still lack control of the language.

Following another path of investigation, I can refer to the statistical report again. It is apparent that the School of Architecture does have a greater number of ineligible students writing the essay than other colleges do. Of the 69 Architecture majors writing the essay in September, 27 were ineligible. Twenty of these 27, or 74 percent, failed. Of the 42 eligible students, only 17 failed, or 41 percent. Moreover, the 27 ineligible students made up 39 percent of the total number of Architecture students, whereas across all colleges there were only 43 ineligible students out of 637, or 6.8 percent.

Clearly, the ineligibility is a contributing factor in failure--but not the only one, since a 43 percent failure of the eligible students still exceeds the September cross-college figure of 38 percent. But finding that ineligibility is a major cause only opens up another question: why are so many students ineligible? Why do they fail the WEPT or not get a B- or better in their comp courses? I think it's still the same question as we started with: why do they fail the essay?

One reason for the high ineligibility rate may be a higher percentage of foreign students, who because of second-language difficulty may not be able to pass the WEPT or their composition courses, so the Architecture administration allows them to try the proficiency essay. The proportion of foreign students is higher for Architecture than for other schools.

Foreign students at UWM characteristically have a hard time with proficiency testing. First they have trouble with the WEPT, the objective placement test that determines eligibility for writing the proficiency essay; then they have trouble with the essay itself. And while there is sympathy in some quarters for their problem, there is no relaxing of requirements. Foreign students enrolled in a college that requires passing the proficiency essay must do so by the same standards as everyone else. So a higher proportion of foreign students in a given college will increase the rate of failure in that college.

The figures for the September essay show that the School of Architecture had seven foreign students writing the essay, all of whom failed. These seven were ten percent of the total of 69 Architecture students. Over all colleges, there were 15 foreign students, making up two percent of the total. So the number of foreign students in the School of Architecture is definitely a factor. How much of a factor can be seen by subtracting the seven from the number of failures and seeing the rate of failure go down from 54 percent to 48 percent.

A corresponding manipulation of the all-college figures would reduce the failure rate by an insignificant amount. This 48 percent failure rate is still ten percent over the rate for all schools, so the number of foreign students writing the essay is obviously not the only factor.

So far I have two contributing factors--the number of ineligible students and the number of foreign students. But these factors only partially explain the high rate of failure. What about composition courses? Do the Architecture students take them? Do they pass them?

At UWM, the colleges that require the proficiency essay do not require any courses in writing. But they recommend them unless their students are eligible for and pass the proficiency essay upon entrance to college. It is presumed that enrollment in writing courses will encourage proficient essay writing. The 1980-81 summary figures for the Architecture students show that out of a total of 314, 146, or 46 percent, took no course. Of these 146, 89 failed the essay, or 61 percent. Of the 168 who took a course of some kind, 99 had a final grade of A or B; 41 of these 99 failed. So we see that many Architecture students do not take writing courses, that many who do take them receive a grade of C or less, but that even taking such courses and achieving good grades does not guarantee success, though it does increase their chances by about 20 percent. So we've found another contributing factor, but we're still left with the need to account for the cause or causes of failure.

Another speculation was that the Architecture students are primarily male, therefore accounting fot the high failure rate since males are generally not as skillful verbally as females. The students in Architecture <u>are</u> primarily male. Of the 65 essays I read, ten were written by females. Of these ten, four wrote passing essays and six failing--a 40-50 proportion--compared to those written by males at a 47-53 ratio. So we gather no new information here.

However, sex of the writer is related to the next point.

I have remaining only one suggestion: cognitive style, or hemispheric dominance of the brain. I save this one for last not because it's going to wrap everything up but because it's even more in the realm of speculation than anything I've presented so far.

The underlying supposition, one for which there is considerable evidence, is that females are superior to males in language-related skills while males are superior in spatially-oriented tasks (Springer and Deutsch, 1981). Verbal processes, including syntactic knowledge, have been shown to be ordinarily centered in the left hemisphere of the brain, together with processes that are propositional, categorical, analytic, symbolic, logical, and abstract. The right hemisphere, on the other hand, generally controls processes that are perceptual, appositional, holistic, synthetic, literal, analogical, and concrete (Lang & Gur, 1980). Ross Winterowd has suggested that both the verbal and the spatial processes are essential for carrying out the task of writing (Winterowd, 1979). It's this suggestion that served to initiate my hypothesis on hemispheric dominance. It might be, I reasoned, that students of Architecture are primarily spatially oriented, thus accounting for their frequent inability to write passing essays. Carl Sagan in Dragons of Eden concludes, as Winterowd does about writing, that "significant creative activities of a culture--legal and ethical systems, art and music, science and technology--are the result of collaborative work by both the left and right hemispheres" (Sagan, 1977). Both Winterowd and Sagan are referring to successful creative activities. Since what I am investigating is the lack of success, perhaps their suggestions and mine are compatible. That is, success in creative activities--for example writing or designing buildings--requires activity in both hemispheres. Furthermore, an improvement in writing skills might be

accompanied by an improvement in architectural skills.

In discussing hemispheric dominance, it's necessary to distinguish between dominance and capacity. Dominance is the tendency of one hemisphere to process information or control response. Capacity is the ability of a hemisphere to perform a task. Levy and Trevarthen speculate that hemispheric activation depends mainly on "what it thinks it can do," which is not necessarily what is expected (Levy & Trevarthen, 1976). We must also be careful not to oversimplify, thus overlooking subtleties of difference.

Recent studies have shown that hemispheric dominance is not as clearcut as once thought. Levy and Gur have concluded that there is considerable variation in laterality and that such variations are signaled by sex, handedness, hand posture in writing, eye dominance, familial handedness, and possibly other variables not yet identified. In other words, there is little support for the commonly held belief that, except for a small percentage of the population, the direction and degree of lateralization are invariant.

It is generally accepted that females are more likely to utilize both sides of the brain for verbal functions than males, and that males are more likely to have a bilateralized spatial function. Levy and Gur suggest that the function that is bilateralized is strong, while the other is weak. Males thus would have a more depressed verbal but more active spatial ability than females. Such tendencies would be qualified by handedness, the presence of left-handed relatives, and other factors.

As I've investigated hemispheric dominance, or specialization, two things have become clear: (1) that the study of laterality is still in its early stages and (2) that if I want to relate cognitive style to quality of writing I'll have to do more study. It does still seem reasonable that a number of

our Architecture students are primarily spatial in their cognitive styles and that undeveloped verbal, linear thinking has inhibited their ability to write essays that are sequentially arranged, logically developed, and syntactically conventional. If what Winterowd and Sagan speculate is true, the students who have the advantage are those whose verbal skills are bilateralized, calling into play the abilities of both sides of the brain.

What I seem to have found so far is that the UWM Architecture students are more likely than other students to fail the proficiency essay for several possibly interrelated reasons: ineligibility (based on their WEPT scores), failure in or lack of writing courses, a non-native language background, sex, and cognitive style. There may be other factors too. I hope that by working more closely with the School of Architecture I can pinpoint the factors and then recommend corrective measures.

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